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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Dominick G. More

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EXAMINER

LUGO, CARLOS

ART UNIT

PAPER NUMBER

3676

DATE MAILED: 06/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/937,373

Applicant(s)

MORE ET AL.

Examiner

Carlos Lugo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to applicant's amendment filed on March 26, 2004.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 22 and 25 are rejected** under 35 U.S.C. 102(b) as being anticipated by US Pat No 3,272,521 to McNenny.

Regarding claim 22, McNenny discloses an annular seal (10) comprising an outer member (16 and 17), having a generally c-shaped and open radially outward, and an inner member (12 and 13) nested within the outer member and also having a generally c-shaped and open radially outward.

The inner member has a wall thickness effective to maintain the outer member in engagement with first and second flanges (Figure 1) in the absence of a spring nested inside the inner member.

The longitudinal radial cross section of the inner member has a central arcuate portion and a pair of distal straight portions extending radially outward from opposite ends of the arcuate portion (Figure 2).

As to claim 25, the fact that the seal is effective to provide a leakage rate of no more than about 4×10^{-12} cm³/s-mm, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the claimed

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quantitative value, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

4. **Claims 22,23 and 25 are rejected** under 35 U.S.C. 102(b) as being anticipated by FR 610,973 to Barbarou.

Regarding claim 22, Barbarou discloses an annular seal (10) comprising an outer member (A), having a generally c-shaped and open radially outward, and an inner member (B) nested within the outer member and also having a generally c-shaped and open radially outward.

The inner member has a wall thickness effective to maintain the outer member in engagement with first and second flanges (Figure 2) in the absence of a spring nested inside the inner member.

The longitudinal radial cross section of the inner member has a central arcuate portion and a pair of distal straight portions extending radially outward from opposite ends of the arcuate portion (Figure 2).

As to claim 23, Barbarou discloses that the inner member having a full plating of a copper-base material (Lines 33-39).

As to claim 25, the fact that the seal is effective to provide a leakage rate of no more than about 4×10^{-12} cm³/s-mm, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the claimed quantitative value, since it has been held that discovering an optimum value of a

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result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

5. **Claims 26,27,29-33 and 35-37 are rejected** under 35 U.S.C. 102(b) as being anticipated by US Pat No 3,188,100 to Delgado.

Regarding claims 26,29,30,32,35 and 36, Delgado discloses an annular seal (10) comprising an outer member (12,13 and 14), having a generally c-shaped and open radially outward, and an inner member (11) nested within the outer member and also having a generally c-shaped and open radially outward. The outer member has a pair of oppositely directed, longitudinally outward-projecting ridges (17 and 18).

The inner member has a wall thickness effective to maintain the outer member in engagement with first and second flanges (Figure 2) in the absence of a spring nested inside the inner member.

As to claims 27,33 and 37, Delgado illustrates that the inner metallic annular member has a characteristic thickness of between about 2 and 4 times a characteristic thickness of the outer metallic annular member (Figure 2).

As to claim 31, Delgado illustrates that the outer metallic annular member is thicker along the ridges.

6. **Claims 35 and 38 are rejected** under 35 U.S.C. 102(b) as being anticipated by US Pat No 4,561,662 to de Villepoix et al (Villepoix).

Regarding claim 35, Villepoix discloses a seal comprising an outer metallic annular member (16), having a generally c-shaped longitudinal radial cross section,

and an inner metallic annular member (14), also having a generally c-shaped longitudinal radial cross section.

The outer metallic annular member has a pair of oppositely directed, longitudinally outward projecting ridges (20) for deformable engaging the pair of opposing flanges. Villepoix illustrates that the outer metallic annular member is thicker along the ridges.

As to claim 38, Villepoix discloses that the inner member is formed of a nickel alloy and the outer member is formed of an aluminum material or copper (Col. 1 Lines 31-35).

7. **Claims 35 and 37 are rejected** under 35 U.S.C. 102(b) as being anticipated by US Pat No 5,022,663 to Fages et al (Fages).

Regarding claim 35, Fages discloses a seal comprising an outer metallic annular member (20), having a generally c-shaped longitudinal radial cross section, and an inner metallic annular member (14), also having a generally c-shaped longitudinal radial cross section.

The outer metallic annular member has a pair of oppositely directed, longitudinally outward projecting ridges (18) for deformable engaging the pair of opposing flanges. Fages illustrates that the outer metallic annular member is thicker along the ridges.

As to claim 37, Fages illustrates that the inner metallic annular member has a characteristic thickness of between about 2 and 4 times a characteristic thickness of the outer metallic annular member (Figure 1).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claim 23 is rejected** under 35 U.S.C. 103(a) as being unpatentable over US Pat No 3,272,521 to McNenny in view of FR Pat No 610,973 to Barbarou.

McNenny fails to disclose that the inner member has a full plating of a copper-base material.

Barbarou teaches that is known in the art to have a seal with the inner member having a full plating of a copper-base material (Lines 33-39).

The selection of a known material based upon its suitability for the intended use is a design consideration within the level of skill of one skilled in the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the same materials, as taught by Barbarou, into a seal as described by McNenny, in order to use the different material characteristics to improve the seal.

10. **Claim 24 is rejected** under 35 U.S.C. 103(a) as being unpatentable over US Pat No 3,272,521 to McNenny in view of US Pat No 4,561,662 to Villepoix et al (Villepoix).

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McNenny fails to disclose that the inner member is formed of a nickel alloy and the outer member is formed of an aluminum material or copper. McNenny discloses that they are made of metal.

Villepoix teaches that is known in the art to have a seal with an inner member formed of a nickel alloy and an outer member formed of an aluminum material or copper (Col. 1 Lines 31-35).

The selection of a known material based upon its suitability for the intended use is a design consideration within the level of skill of one skilled in the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the same materials, as taught by Villepoix, into a seal as described by McNenny, in order to use the different material characteristics to improve the seal.

11. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over FR 610,973 to Barbarou in view of US Pat No 4,561,662 to Villepoix et al (Villepoix).

Barbarou fails to disclose that the inner member is formed of a nickel alloy and the outer member is formed of an aluminum material or copper. Barbarou discloses that they are made of metal.

Villepoix teaches that is known in the art to have a seal with an inner member formed of a nickel alloy and an outer member formed of an aluminum material or copper (Col. 1 Lines 31-35).

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The selection of a known material based upon its suitability for the intended use is a design consideration within the level of skill of one skilled in the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the same materials, as taught by Villepoix, into a seal as described by Barbarou, in order to use the different material characteristics to improve the seal.

12. Claims 28,34,38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat No 3,188,100 to Delgado in view of US Pat No 4,561,662 to Villepoix et al (Villepoix).

Delgado fails to disclose that the inner member is formed of a nickel alloy and the outer member is formed of an aluminum material or copper. Delgado discloses that they are made of metal.

Villepoix teaches that is known in the art to have a seal with an inner member formed of a nickel alloy and an outer member formed of an aluminum material or copper (Col. 1 Lines 31-35).

The selection of a known material based upon its suitability for the intended use is a design consideration within the level of skill of one skilled in the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the same materials, as taught by Villepoix, into a seal as

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described by Delgado, in order to use the different material characteristics to improve the seal.

13. **Claims 30-34 and 37 are rejected** under 35 U.S.C. 103(a) as being unpatentable over US Pat No 4,561,662 to de Villepoix et al (Villepoix) in view of US Pat No 6,357,759 to Azuma et al (Azuma).

Regarding claims 30 and 32, Villepoix discloses a seal comprising an outer metallic annular member (16), having a generally c-shaped longitudinal radial cross section, and an inner metallic annular member (14), also having a generally c-shaped longitudinal radial cross section.

The outer metallic annular member has a pair of oppositely directed, longitudinally outward projecting ridges (20) for deformable engaging the pair of opposing flanges. However, Villepoix fails to disclose that the ridges are flat lapped ridges.

Azuma teaches that is known in the art to have a seal (2) with an outer member with flat lapped ridges (25).

A change in the shape of a prior art device is a design consideration within the level of skill of one skilled in the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have flat lapped ridges, as taught by Azuma, into a device as described by Villepoix, in order to secure the outer member with the first and second flanges.

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As to claim 31, Villepoix illustrates that the outer metallic annular member is thicker along the ridges.

As to claims 33 and 37, Villepoix fails to disclose that the inner metallic annular member has a characteristic thickness of between about 2 and 4 times a characteristic thickness of the outer metallic annular member.

Azuma teaches that is known in the art to have an inner metallic annular member with a characteristic thickness of between about 2 and 4 times a characteristic thickness of an outer metallic annular member (Figure 3).

A change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a difference in thickness, as taught by Azuma, into a device as described by Villepoix, in order to help in the sealing of the outer metallic annular member with the first and second flanges.

As to claim 34, Villepoix discloses that the inner member is formed of a nickel alloy and the outer member is formed of an aluminum material or copper (Col. 1 Lines 31-35).

14. **Claims 30-33 are rejected** under 35 U.S.C. 103(a) as being unpatentable over US Pat No 5,022,663 to Fages et al (Fages) in view of US Pat No 6,357,759 to Azuma et al (Azuma).

Regarding claims 30 and 32, Fages discloses a seal comprising an outer metallic annular member (20), having a generally c-shaped longitudinal radial cross section,

and an inner metallic annular member (14), also having a generally c-shaped longitudinal radial cross section.

The outer metallic annular member has a pair of oppositely directed, longitudinally outward projecting ridges (18) for deformable engaging the pair of opposing flanges. However, Fages fails to disclose that the ridges are flat lapped ridges.

Azuma teaches that is known in the art to have a seal (2) with an outer member with flat lapped ridges (25).

A change in the shape of a prior art device is a design consideration within the level of skill of one skilled in the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have flat lapped ridges, as taught by Azuma, into a device as described by Fages, in order to secure the outer member with the first and second flanges.

As to claim 31, Fages illustrates that the outer metallic annular member is thicker along the ridges.

As to claim 33, Fages illustrates that the inner metallic annular member has a characteristic thickness of between about 2 and 4 times a characteristic thickness of the outer metallic annular member (Figure 1).

15. **Claims 34 and 38 are rejected** under 35 U.S.C. 103(a) as being unpatentable over US Pat No 5,022,663 to Fages et al (Fages) in view of US Pat No 6,357,759 to

Azuma et al (Azuma) and further in view of US Pat No 4,561,662 to de Villepoix et al (Villepoix).

Fages, as modified by Azuma, fails to disclose that that the inner member is formed of a nickel alloy and the outer member is formed of an aluminum material or copper.

Villepoix teaches that is known in the art to have a seal with an inner member formed of a nickel alloy and an outer member formed of an aluminum material or copper (Col. 1 Lines 31-35).

The selection of a known material based upon its suitability for the intended use is a design consideration within the level of skill of one skilled in the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the same materials, as taught by Villepoix, into a seal as described by Fages, as modified by Azuma, in order to use the different material characteristics to improve the seal.

16. **Claim 39 is rejected** under 35 U.S.C. 103(a) as being unpatentable over US Pat No 4,561,662 to Villepoix et al (Villepoix) in view of FR Pat No 610,973 to Barbarou.

Villepoix fails to disclose that the inner member has a full plating of a copper-base material.

Barbarou teaches that is known in the art to have a seal with the inner member having a full plating of a copper-base material (Lines 33-39).

The selection of a known material based upon its suitability for the intended use is a design consideration within the level of skill of one skilled in the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the same materials, as taught by Barbarou, into a seal as described by Villepoix, in order to use the different material characteristics to improve the seal.

17. **Claim 39 is rejected** under 35 U.S.C. 103(a) as being unpatentable over US Pat No 5,022,663 to Fages et al (Fages) in view of FR Pat No 610,973 to Barbarou.

Fages fails to disclose that the inner member has a full plating of a copper-base material.

Barbarou teaches that is known in the art to have a seal with the inner member having a full plating of a copper-base material (Lines 33-39).

The selection of a known material based upon its suitability for the intended use is a design consideration within the level of skill of one skilled in the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the same materials, as taught by Barbarou, into a seal as described by Fages, in order to use the different material characteristics to improve the seal.

18. **Claims 40-42 are rejected** under 35 U.S.C. 103(a) as being unpatentable over US Pat No 3,272,521 to McNenny in view of US Pat No 4,218,067 to Halling.

McNenny fails to disclose a method of manufacturing the seal using welding, die forming and rolling methods.

Halling teaches that is known in the art to use a method to manufacture a seal using welding, die forming and rolling methods (Col. 2 Lines 40-48).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a manufacturing method, as taught by Halling, into a device as described by McNenny, in order to create the seal.

19. **Claims 40-42 are rejected** under 35 U.S.C. 103(a) as being unpatentable over FR 610,973 to Barbarou in view of US Pat No 4,218,067 to Halling.

Barbarou fails to disclose a method of manufacturing the seal using welding, die forming and rolling methods.

Halling teaches that is known in the art to use a method to manufacture a seal using welding, die forming and rolling methods (Col. 2 Lines 40-48).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a manufacturing method, as taught by Halling, into a device as described by Barbarou, in order to create the seal.

20. **Claims 40-42 are rejected** under 35 U.S.C. 103(a) as being unpatentable over US Pat No 3,188,100 to Delgado in view of US Pat No 4,218,067 to Halling.

Delgado fails to disclose a method of manufacturing the seal using welding, die forming and rolling methods. Delgado discloses that the seal is machined.

Halling teaches that is known in the art to use a method to manufacture a seal using welding, die forming and rolling methods (Col. 2 Lines 40-48).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a manufacturing method, as taught by Halling, into a device as described by Delgado, in order to create the seal.

21. **Claims 40-42 are rejected** under 35 U.S.C. 103(a) as being unpatentable over US Pat No 4,561,662 to Villepoix et al (Villepoix) in view of US Pat No 4,218,067 to Halling.

Villepoix fails to disclose a method of manufacturing the seal using welding, die forming and rolling methods.

Halling teaches that is known in the art to use a method to manufacture a seal using welding, die forming and rolling methods (Col. 2 Lines 40-48).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a manufacturing method, as taught by Halling, into a device as described by Villepoix, in order to create the seal.

22. **Claims 40-42 are rejected** under 35 U.S.C. 103(a) as being unpatentable over US Pat No 5,022,663 to Fages et al (Fages) in view of US Pat No 4,218,067 to Halling.

Fages fails to disclose a method of manufacturing the seal using welding, die forming and rolling methods.

Halling teaches that is known in the art to use a method to manufacture a seal using welding, die forming and rolling methods (Col: 2 Lines 40-48).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a manufacturing method, as taught by Halling, into a device as described by Fages, in order to create the seal.

Response to Arguments

23. Applicant's arguments filed on March 26, 2004 have been fully considered but they are not persuasive.

Regarding applicant's arguments that McNenny fails to disclose that the seal has a C-shape and open radially outward (Page 7 Line 11), clearly, McNenny discloses this limitation (Figures 2 and 4).

As to applicant's arguments that Barbarou fails to disclose that the seal open radially outward (Page 7 Line 22), clearly, as seen in Figure 3, the seal has a C-shape that opens radially outwardly.

As to applicant's arguments that Barbarou fails to disclose a full plating of copper base material (Page 7 Line 25), Barbarou discloses that the inner member B is a layer of copper base material (see Page 2 Lines 11 and 12 of the translation).

As to applicant's arguments that Barbarou fails to disclose the claimed leakage rate (Page 8 Line 7), the fact that the seal is effective to provide a leakage rate of no more than about 4×10^{-12} cm³/s-mm, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the claimed quantitative value, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

As to applicant's arguments that Delgado fails to disclose a generally C-shape outer metallic member (Page 8 Line 12), Delgado discloses a generally C-shape outer metallic member (Figure 2).

As to applicant's arguments that Delgado fails to disclose that each of the ridges has a longitudinal extent beyond a thickness of the outer member away from the ridges (Page 8 Line 14), Delgado illustrates that the ridges 17 and 18 have a longitudinal extent beyond (or far from) the thickness of the outer member that is away from the ridges.

As to applicant's arguments that Delgado fails to disclose that fails to disclose a flat lapping (Page 8 Line 19), Delgado discloses flat lapping areas (15 and 16).

As to applicant's arguments that Delgado fails to disclose that the outer member is thicker along the ridges than anywhere else (Page 8 Line 21), Delgado clearly illustrates that at the ridges is thicker than in the other parts (Figure 2).

As to applicant's arguments that Villepoix fails to disclose that the outer member is thicker along the ridges (Page 9 Line 1), Villepoix clearly illustrates this limitation (Figure 1).

As to applicant's arguments that Villepoix fails to disclose that each of the ridges has a longitudinal extent beyond a thickness of the outer member away from the ridges (Page 9 Line 7), Villepoix illustrates that the ridges 20 have a longitudinal extent beyond (or far from) the thickness of the outer member that is away from the ridges.

As to applicant's arguments that Fages fails to disclose that the outer member is thicker along the ridges (Page 9 Line 10), Fages clearly illustrates this limitation (Figure 1).

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As to applicant's arguments that the rejection of claims 22,23 and 25 in view of Delgado, as modified by Barbarou, is improper (Page 9 Line 20), the rejection is withdrawn.

As to applicant's arguments that the rejection to claim 23 in view of McNenny, as modified by Barbarou, is improper (Page 10 Line 15), McNenny discloses that the inner member is made of metal. Barbarou teaches that is well known in the art to have a copper base material. The selection of a well-known material is considered as a design consideration within the level of skill of one skilled in the art.

As to applicant's arguments that the rejection to claim 24 in view of McNenny, as modified by Villepoix, is improper (Page 10 Line 19), see arguments regarding claim 23 as rejected by McNenny, as modified by Barbarou.

As to applicant's arguments that the rejection to claim 24 in view of Barbarou, as modified by Villepoix, is improper (Page 10 Line 22), see arguments regarding claim 23 as rejected by McNenny, as modified by Barbarou.

As to applicant's arguments that the rejection to claim 24 in view of Delgado, as modified by Villepoix, is improper (Page 10 Line 25), the rejection is withdrawn because claim 24 depends from claim 22 and the rejection was withdrawn, see arguments above regarding the rejection of claims 22,23 and 25 in view of Delgado, as modified by Barbarou.

As to applicant's arguments that the rejection to claims 28,34,38 and 39 in view of Delgado, as modified by Villepoix, is improper (Page 11 Line 3), see arguments regarding claim 23 as rejected by McNenny, as modified by Barbarou.

As to applicant's arguments that the rejection to claims 30-34 and 37 in view of Villepoix as modified by Azuma is not clear (Page 11 Line 6), clearly, Villepoix, as modified by Azuma, disclose the invention as claimed in claims 30-34 and 37. The fact of how Azuma's ridges are manufactured is not relevant. The claim is reciting a shape; the process of how to make it is not relevant.

As to applicant's arguments that the rejection to claims 30-34 and 37 in view of Fages as modified by Azuma is not clear (Page 11 Line 23), see arguments regarding claims 30-34 and 37 as rejected by Villepoix, as modified by Azuma.

As to applicant's arguments that the rejection of claim 39 in view of Villepoix as modified by Barbarou is improper (Page 12 Line 5), see arguments regarding claim 23 as rejected by McNenny, as modified by Barbarou.

As to applicant's arguments that the rejection of claim 39 in view of Fages as modified by Barbarou is improper (Page 12 Line 9), see arguments regarding claim 23 as rejected by McNenny, as modified by Barbarou.

As to applicant's arguments that the rejection of claims 40-42 in view of McNenny as modified by Halling is improper (Page 12 Line 13), Halling teaches that is known in the art to use a method to manufacture a seal using welding, die forming and rolling methods (Col. 2 Lines 40-48). It would have been obvious to use the same manufacturing method in order to create the seal.

As to applicant's arguments that the rejection of claims 40-42 in view of Barbarou as modified by Halling is improper (Page 12 Line 19), see arguments regarding claims 40-42 as rejected by McNenny as modified by Halling.

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As to applicant's arguments that the rejection of claims 40-42 in view of Delgado as modified by Halling is improper (Page 12 Line 23), see arguments regarding claims 40-42 as rejected by McNenny as modified by Halling.

As to applicant's arguments that the rejection of claims 40-42 in view of Delgado as modified by Barbarou and further by Halling is improper (Page 13 Line 2), the rejection is withdrawn.

As to applicant's arguments that the rejection of claims 40-42 in view of Villepoix as modified by Halling is improper (Page 13 Line 5), see arguments regarding claims 40-42 as rejected by McNenny as modified by Halling.

As to applicant's arguments that the rejection of claims 40-42 in view of Fages as modified by Halling is improper (Page 13 Line 9), see arguments regarding claims 40-42 as rejected by McNenny as modified by Halling.

Conclusion

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the

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mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lugo whose telephone number is 703-305-9747. The examiner can normally be reached on 9-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 703-308-2686. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5771.

Carlos Lugo
AU 3676

June 14, 2004.

WILLIAM L. MILLER
PRIMARY EXAMINER
